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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/980,549
Filing Date: April 05, 2002
Appellant(s): KOISTINEN, TOMMI

Mr. Shane Kennedy
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/24/2008 appealing from the Office action mailed 11/16/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,367,523	CHANG et al	11-1994
5,493,610	SUZUKI et al	2-1996

Yletyinen, Tomi. "The Quality of Voice over IP" Master's Thesis, HUT/Department of Electrical and Communication Engineering, 1998, pp.1-110.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4-5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al *(U.S. Patent: 5,493,610)* in view of Yletyinen *("The Quality of Voice Over IP," 1998)*.

With respect to **Claims 1, 4, and 9**, Suzuki discloses:

A transceiver means being operable with variable transfer rates *(means for controlling a data transmission rate, Col. 4, Lines 41-62)*;

A detecting means for detecting the load upon a network circuit *(means for determining a load status of a transmission circuit, Col. 6, Lines 1-12; and Col. 10, Lines 61-65)*;

A control means for adjusting the transfer rate of the transceiver means in response to the detected load *(means for designating a transmission rate of a data signal, Col. 6, Lines 1-12; and Col. 10, Lines 61-65)*;

Characterized in that:

The transceiver means comprises a modem for modulating and demodulating of non-speech data *(modem for use with facsimile-related data, Col. 4, Lines 41-62; Col. 6, Lines 35-35; and Fig. 1, Element 5)* and a codec for encoding and decoding of speech data *(speech encoder/decoder Col. 4, Lines 41-62; and Fig. 1 Elements 7 and 13)*.

Suzuki does not teach adjusting multiple transmission rates according to multiple priorities, wherein a speech codec has a higher priority than non-speech data. Suzuki also does not disclose device implementation in a VoIP gateway disposed between a plurality of networks. Yletyinen, however, discloses a VoIP gateway capable of decoding and encoding speech for voice over Internet protocol, which contains multiple transmission/receiving means corresponding to telephone and IP networks for the reception/transmission of speech and other non-speech data types *(Fig. 2-3; and Section 2.5, Page 8)*. Yletyinen also discloses that the VoIP gateway is capable of adjusting a frame transmission rate in order to respond to congestion, wherein audio *(i.e., speech)* data rates receive priority over the rates for other types of data *(Section 3.3.2, Page 42)*.

Suzuki and Yletyinen are analogous art because they are from a similar field of endeavor in congestion-based transmission rate adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Suzuki with the VoIP gateway taught by Yletyinen in order to provide a system for cost-effective voice transmission that allows communication between users of different networks that is capable of responding to varying congestion conditions *(Yletyinen, Pages 6 and 42)*.

With respect to **Claims 2 and 5**, Suzuki further discloses:

The transceiver means comprises a plurality of predetermined transfer rates and the control means is adapted to select one of the predetermined transfer rates in response to the detected load *(multiple transmission rates, Col. 6, Lines 55-67; and transmission rate designation, Col. 6, Lines 1-12)*.

Claims 3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al *(U.S. Patent: 5,493,610)* in view of Yletyinen and further in view of Chang et al *(U.S. Patent: 5,367,523)*.

With respect to **Claims 3 and 6-8**, Suzuki in view of Yletyinen discloses the congestion control VoIP gateway as applied to Claims 1, 4-5, and 9. Suzuki in view of Yletyinen do not explicitly disclose measuring a round trip of a test packet in order determine a network load, however Chang discloses:

Sending a test packet to a predetermined destination over the network, receiving the test pack back from the predetermined destination and analyzing the occurring delay in order to

determine the load on the network *(determining network congestion based on a round trip delay of a rate feedback request sample packet, Col. 7, Lines 46-56; and Col. 10, Lines 29-38).*

Suzuki, Yletyinen, and Chang are analogous art because they are from a similar field of endeavor in congestion-based transmission rate adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Suzuki in view of Yletyinen with the delay detection means taught by Chang in order to provide a convenient means for dynamically tracking network congestion *(Chang, Col. 7, Lines 46-56).*

(10) Response to Argument

The appellant first traverses the art rejection of claim 1 by arguing that their claimed invention requires that a load upon a packet network and Suzuki et al *(U.S. Patent: 5,493,610) (hereinafter "Suzuki")* fails to disclose such a limitation because Suzuki is only concerned with measuring such a load in a "circuit switched network" and is "completely inapplicable to a" packet network *(Appeal Brief, Pages 5-7).*

In response, the examiner notes that this limitation is taught by the combination of the prior art teachings and not merely the teachings of Suzuki. More specifically, Suzuki evidences that measuring a load in a communication network is not a new concept in the art *("load of the transmission circuit", Col. 6, Lines 1-12 and Col. 10, Lines 61-65).* In the rejection from the Final Office Action dated 11/16/2007, Suzuki was not relied upon to provide the specific teaching of a packet switched network. This deficiency was also acknowledged by the examiner in the same Office Action *(Suzuki does not teach "VoIP" network/gateway, wherein a VoIP network is a packet switched network- see for example claim 1 and Page iii of Yletyinen ("The*

Quality of Voice over IP," 1998) (hereinafter, "Yletyinen"), ("voice over packet networks using the Internet Protocol"). It is the Yletyinen reference that overcomes this deficiency in Suzuki by teaching a VoIP packet network and gateway and the manner in which to respond to detected load conditions in a packet network *(i.e., "delayed packets"- the network is congested to the point where packet transmission/reception is delayed)* (*Fig. 2-3; Section 2.5, Page 8; and Section 3.3.2, Page 42)*. Also, the combination of the prior art of record is not the result of combining/merging the two different networks, but substitution *(with an associated benefit- See the above Rejection)* of the load detection and data transmission of Suzuki into a VoIP network. Since Yletyinen's system similarly deals with the same functionality of congestion determination, the transmission of speech and data, and responding to congestion *("congestion", "data…audio", and "media degradation", Page 42, Section 3.3.2)*, Suzuki's functions would be capable of being implemented in the system of Yletyinen and are not "completely inapplicable" as indicated by the applicant. Thus, the examiner notes that since Suzuki teaches that load upon a network is detected, Yletyinen teaches the specific VoIP packet network and how to respond to a detected load therein, and both references teach similar functionality, it is the combination of the teachings of Suzuki and Yletyinen that teaches the aforementioned claim limitation. As such, this appellant's argument has been fully considered, but is not convincing.

The appellant continues to traverse the art rejection of claim 1 by secondly alleging that the prior art fails to disclose or suggest why a person skilled in the art would adjust a transfer rate of a transceiver (containing a codec/modem for a circuit switched network based on a detected load in a packet switched network *(Appeal Brief, Page 7)*. In support of these arguments, the

appellant first alleges that it was "improper to modify the circuit switched network of Suzuki with the features of the packet switched network of Yletyinen" *(Amendment, Page 8)*. In response, it is noted that the systems of Suzuki and Yletyinen both deal with a commonly encountered network condition- congestion. When any type of network devices attempts to transmit an excess of data at one time issues such as delay and dropped packets can result. Suzuki indicates his network contains a means for transmitting both voice *(Col. 4, Lines 41-62; and Fig. 1, Elements 7 and 13)* and non-voice data (*Col. 4, Lines 41-62; Col. 6, Lines 35-55; and Fig. 1, Element 5)*. Suzuki's network also includes a means for adjusting a data transmission rate *(Col. 4, Lines 41-62)*. Yletyinen likewise discloses a network that contains a similar system capabilities for transmitting both voice and non-voice data (Section 2.5, Page 8 and Section 3.3.2, Page 42). Yletyinen also teaches a means for responding to network congestion conditions *(Section 3.3.2, Page 42)*. Thus, Suzuki's system explicitly calls out the system elements of a codec and modem and notes that a network rate can be controlled, while Yletyinen likewise teaches some voice/non-voice transmission means and notes that a network rate can be controlled. Since the two systems have similar structure, both deal with the well known concept of adjusting a data rate in response to a load condition (which is a technique that can be applied to multiple networks regardless of their type), and the VoIP network/gateway of Yletyinen provides the noted benefit of allowing users from different networks to communicate *(Yletyinen, Page 6)* with the added capability of being able to respond to varying congestion conditions *(Yletyinen, Page 42) (see also, Prior OA, Page 5)*, the examiner notes that motivation for utilizing the codec/modem and controller of Suzuki in the VoIP network of Yletyinen has been provided and is proper. There is also a reasonable expectation of success do to the similar data

types for transmission, rate controller, and noted benefit in Yletyinen. Thus, these arguments have been fully considered, but are not convincing.

The appellant continues on to acknowledge that Yletyinen does teach "adjusting a frame or packet rate for a VoIP (packet switched) network based on congestion within the same VoIP (packet switched) network", but further argues that the references provide "no suggestion or motivation for adjusting a transfer rate of a transceiver such as a codec or modem...based on a congestion state or load of a packet switched network" *(Appeal Brief, Page 8)*. The examiner notes though, that there is more than a suggestion to adjust a transfer rate, Yletyinen explicitly teaches this rate adjustment limitation for voice and non-voice transmission means *(i.e., transmission devices for audio and data packets in Yletyinen or the explicitly called out codec(voice)/modem(data) in Suzuki) (Yletyinen, Page 42)* as was pointed out by the applicant *("arguably discloses adjusting a frame or packet rate within the VoIP (packet switched) network", Appeal Brief, Page 8)*. Since the systems are analogous art for the reasons noted above and since the Yletyinen reference itself provides motivation for modifying the teachings of Suzuki as was also noted above, these arguments have been fully considered, but are not convincing.

Lastly, with respect to Claim 1, the appellant argues that Suzuki in view of Yletyinen fails to disclose giving speech data priority over non-speech data because: (a.) Yletyinen "lists audio data third out of four data types, and therefore does not disclose giving speech data priority of non-speech data" and (b.) Yletyinen "does not describe how this degradation is achieved" specifically with respect to "controlling the source of data" (Appeal Brief, Page 9). In response

to point (a.), the examiner notes that it appears that the appellant has mischaracterized the reference. More specifically, Page 42 of Yletyinen details a way of responding to network "congestion" according to responses that *degrade* or *lower* certain data type aspects in an order starting with video. Since video is degraded or lowered first, Yletyinen is implying that he cares least about lowering the quality of this data type. Yletyinen next continues, in the set order, to degrade data transmissions, thus, Yletyinen is implying that he cares more about data than video types. Next, Yletyinen degrades audio/voice data, and is thus, implying that he is concerned more about audio transmission than data or video transmission because he degrades those types of data first. In other words, Yletyinen's order list is not a ranking of importance from first to last as is argued by the applicant, but because the media data is being *degraded*, actually appearing later in the order means that the data is more important or has more priority then the preceding types because Yletyinen would rather degrade those other data types first and preserve the audio/voice data *(i.e., Yletyinen's list can be though of as an inverse priority/importance list)*. In response to point (b.), the examiner points out that Yletyinen explicitly recites multiple forms of the way of responding to congestions, which includes short and long term responses *(Section 3.3.2)*. Among these responses is *reduction* of media/frame rate, as is required by the presently claimed invention. Thus, since Yletyinen teaches that audio voice *(i.e., Voice Over IP)* is degraded *(meaning a reduction in data rate)* later than data, the appellants arguments have been fully considered, but are not convincing.

The appellants arguments with respect to claim 4 are similar to those directed to claim 1 *(Appeal Brief, Pages 9-10)*. In regards to such arguments, see the above response directed towards claim 1.

The appellants arguments with respect to claim 9 are similar to those directed to claim 1 *(Appeal Brief, Pages 10-11)*. In regards to such arguments, see the above response directed towards claim 1.

The appellants arguments with respect to dependent claims 3 and 6-8 are similar to those directed to claim 1 *(Appeal Brief, Page 11)*. In regards to such arguments, see the above response directed towards claim 1.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/James S. Wozniak/

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/R. D./

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